Factors influencing adherence to an Emergency Department National Protocol

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Conflicts

None declared

ABSTRACT

Objective

To identify factors that influence emergency nurses' adherence to an emergency department national protocol (EDNP).

Methods

Survey of emergency nurses (n=200) and physicians with medical end-responsibility on an emergency department (n=103).

Results

Emergency nurses' self-reported adherence to the EDNP was 38%, 55% of the nurses and 44% of the physicians were aware of the protocol. Interference with professional autonomy, insufficient organisational support, and the EDNP's applicability were indicated as barriers for adherence.

Conclusion

A main influencing factor seems awareness. Other factors related to the individual, the organisation and to protocol characteristics. Solely disseminating the EDNP is not enough to get the protocol used in clinical practice.

Guideline adherence [Mesh]

Emergency nursing [Mesh]

INTRODUCTION

Guidelines and protocols are supposed to improve quality of care and reduce variation of practice [1]. Yet, a gap between recommended care and delivered care often exists [2]. This gap is also present in the emergency department (ED) setting with suboptimal adherence to guidelines and protocols [3-5]. It is important to identify factors which influence adherence to facilitate the development or selection of strategies to improve adherence [2].

Objective

To identify factors that influence emergency nurses' adherence to an emergency department national protocol (EDNP).

METHODS

Setting

In the Netherlands, EDs are staffed with emergency nurses, emergency physicians and medical residents. To support clinical practice by emergency nurses the EDNP was developed, which was intended as input for emergency nursing education and consists of consensus based treatment algorithms [6]. (Online demo at http://www.lpseh.nl/demo/index.htm). After its publication, the EDNP was disseminated at all EDs. Emergency nurses can consult the EDNP online when they are members of the Dutch Emergency Nurses Association (DENA), or as a book if present on their ED.

Design

We adopted a quantitative, descriptive design and analysed target group and setting [2]. The target group consisted of emergency nurses and the setting included physicians with medical end-responsibility at the ED as they have to support the EDNP.

Questionnaire

We developed a questionnaire with questions and statements on adherence and factors influencing adherence by modifying an instrument that consisted of statements regarding general and hand hygiene guidelines [7]. The statements on hand hygiene were excluded. The general statements were modified to fit the Dutch setting. After translation into Dutch by three independent researchers, the

instrument was reviewed, adjusted and face validated by experts in emergency care practice and science. Finally, the statements and questions were categorised into a framework of individual, organisational, and social perspectives, and protocol characteristics [1]. We used the original six-point Likert scale, ranging from strongly agree to strongly disagree. Adherence to the EDNP was operationalised as a self rating scale: emergency nurses rated their adherence between 0-100 percent.

Sample

We surveyed a random sample (n=200) of emergency nurses from the member database (n=628) of the DENA and all physicians with medical end-responsibility (n=103). Criteria for filling in the questionnaire included registration and employment as emergency nurse or physician. The need for ethical approval was waived by the regional ethical committee.

RESULTS

Seventy-eight (39%) emergency nurses and 50 (49%) physicians returned the questionnaire, a total response of 128 (42%). Table 1 shows respondents' characteristics. Forty-two emergency nurses (55%) and 22 emergency physicians (44%) were aware of the EDNP. These respondents completed the questionnaire. Twenty-two of the 42 emergency nurses rated an average adherence of 38% (SD32.4), the other 20 nurses did not provide a percentage.

From the emergency nurses' individual perspective, 33% stated that the EDNP interfered with professional autonomy, and 41% stated that they preferred personal routines. As for organisational factors, 51% disagreed with the protocol being important in the organisation, 79% stated they were not really expected to use the EDNP, and 82% disagreed with sufficiency of support to implement the EDNP. Twenty-seven percent of the emergency nurses thought the EDNP was too "cookbook-like", and 42% agreed that the EDNP was difficult to apply in practice.

Table 1 Respondents' characteristics

	Emergency nurses	Physicians
	%	%
Gender		
Male	20	70
Age		
20-29 years	3	0
30-39 years	20	36
40-49 years	38	46
50-59 years	38	16
>60 years	1	2
ED work experience		
0-4 years	7	22
5-9 years	21	60
10-14 years	22	16
15-19 years	19	2
20-24 years	22	0
25-29 years	4	0
>30 years	5	0
Function*	-	
Trauma surgeon		42
Emergency physician		34
Surgeon		28
Internist		2
Other		4
Basic education*		-
In-service hospital	71	
In-service psychiatric ward	3	
In-service hospital + psychiatric ward	5	
Intermediate nursing education	4	
Bachelor of nursing	16	
Other	9	
Emergency Department Courses*		-
Initial ED training	95	
Triage course	64	
Nurse Practitioner	1	
Trauma Nursing Core Course	91	
Emergency Nursing Pediatric Course	49	
Other	22	

*multiple answers possible

From the physicians' individual perspective, 41% stated that the EDNP interfered with professional autonomy, and 55% preferred personal routines. Regarding organisational factors, 38% of the physicians agreed that the EDNP was considered important by the organisation, and 65% experienced insufficient support to implement the EDNP. Furthermore, 52% disagreed with the physicians' responsibility to stimulate usage. Regarding protocol characteristics, 91% of the physicians agreed with the EDNP standardizing care, and 50% agreed with the EDNP improving patient outcomes. Finally, 62% found the EDNP too "cookbook-like" .

Table 2 Influencing factors

Emergency nurses					Physicians			
Strongly agree %	(somewhat) agree %	(somewhat) disagree %	strongly disagree %		Strongly agree %	(somewhat) agree %	(somewhat) disagree %	strongly disagree %
				Individual				
16	74	10	0	I am familiar with one of the algorithms from the EDNP	13	73	14	0
11	63	26	0	It is impossible for me to keep up with all the algorithms of the EDNP	18	55	27	0
0	33	67	0	The EDNP interferes with my professional autonomy	0	41	55	4
5	36	56	3	I would prefer to work on the basis of my routines and habits rather than to work on the basis of the EDNP	9	46	45	0
0	18	80	2	Generally, the EDNP is cumbersome and inconvenient	5	18	77	0
0	0	44	56	I/nurses always register which algorithms from the EDNP I/they have used	0	0	59	41
0	3	36	61	I/nurses always register from which algorithm from the EDNP I/they have deviated	0	0	54	46
8	4	45	0	I prefer working with own hospital protocols instead of working with the EDNP		-		
3	28	67	2	Following the EDNP is time consuming		-		
0	8	81	11	I disagree with the content of the EDNP		-		
				Organisational				
23	44	25	8	The EDNP is readily available (paper/digital)	19	33	43	5
3	46	48	3	In this organisation, the EDNP is important	0	38	43	19
13	66	18	3	I am/nurses are not really expected to use the EDNP in daily practice	14	32	50	4
0	18	69	13	In my organisation there is sufficient support to implement the EDNP	5	30	55	10
18	59	23	0	Not training the EDNP increases the risk of malpractice	10	45	35	10
0	0	49	51	When I do not use the EDNP there are consequences		-		
	-			It is a task of the physician with medical end-responsibility to stimulate usage of the EDNP	0	48	33	19
				Social				
0	8	56	36	Patients are aware that emergency nurses work with the EDNP/protocols	0	9	50	41
0	11	60	29	My colleagues think it is important to work with the EDNP		-		
				Protocol characteristics				
				The EDNP…				
3	24	73	0	…is too "cookbook-like"	5	57	38	0
0	71	29	0	…is practical to use	0	46	50	4
0	42	50	8	…is difficult to apply	9	41	50	0
3	75	22	0	…improves patient outcomes	0	50	50	0
3	89	8	0	…standardizes care and assures that patients are treated in a consistent way	0	91	9	0

DISCUSSION

We identified factors influencing emergency nurses' adherence to the EDNP. With only half of the nurses and physicians aware of the existence of the EDNP, awareness seems the main influencing factor. This resembles other studies [8, 9]. Poor awareness exists despite the nurses' membership of the DENA which developed and disseminated the EDNP. Three reasons could explain this poor awareness: (1) the protocol was disseminated to EDs without an implementation strategy, (b) high percentages of nurses and physicians missed sufficient organisational support and (c) the EDNP is not integrated in education and training of emergency nurses.

The self-reported adherence rate was low compared to other research [3-5]. Our percentage probably represents the best-case scenario as responders may have a higher adherence rate than non-responders. Valid contraindications could explain deviation from the EDNP, but only few emergency nurses reported registering protocol deviations, so insight in contraindications is lacking. Furthermore, local hospital protocols can be used instead of the EDNP. It is unknown to what extent these local protocols meet the EDNP.

The struggle of nurses and physicians with their professional autonomy may relate to criticism to evidence based practice, where protocols are perceived as a threat to the professional autonomy [10]. This may also explain the relatively high percentages of nurses and physicians who preferred local protocols and personal routines to the EDNP.

Finally, the applicability of the EDNP is perceived as moderate by the emergency nurses and physicians. Reasons could be that the EDNP as national protocol still needs to be tailored to local emergency departments. Also, although these emergency nurses and physicians were aware of the EDNP, they may not be sufficiently familiar with the content to apply the protocol.

Recommendations

Our results confirm the importance of awareness [1]. Strategies should focus on enhancing awareness among the principal professionals. The EDNP should be reintroduced in practice, with additional strategies focused on professional autonomy, organisational support, and the EDNPs applicability.

Limitations

The modest response rate and poor awareness limits the overall generalizability of the findings. Furthermore, the EDNP was the research subject, which may limit the transferability to other settings and protocols.

Conclusion

Emergency nurses' adherence to the EDNP is poor. A main influencing factor for adherence is awareness. This underlines that dissemination of protocols is not enough to get them used in clinical practice, and that an analysis of the target group and setting is essential to identify factors influencing adherence. After awareness has been improved, implementation strategies should focus on professional autonomy, organisational support, and applicability.

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